

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SG2004/000371

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl.?: B81B 7/00, 1/00; B01D 61/42

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPAT, INSPEC keywords: actuat; electroosmo, electric double layer, EDL, electrokinetic; piston, plunger; micro, nano, miniatur; fluid, liquid, electroly; pressure, force, push; electric field; IPC: B81B/-, B01D61/42

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6537437 B1 (GALAMBOS et al.) 25 March 2003 Column 15 line 28 – column 17 line 39; Figs. 6-8B	1-2, 9, 11, 14-17, 24, 26, 29
A	US 6277257 B1 (PAUL et al.) 21 August 2001 Whole document, in particular, column 4 lines 45-49	
P, A	LASER D J and SANTIAGO J G, A review of micropumps, Journal of Micromechanics and Microengineering, vol. 14 (2004), no. 6, pp. R35-R64, published 19 April 2004 See pages R54-R56	

Further documents are listed in the continuation of Box C

See patent family annex

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
27 January 2005

Date of mailing of the international search report, 2 FEB 2005

Name and mailing address of the ISA/AU
AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaaustralia.gov.au
Facsimile No. (02) 6285 3929

Authorized officer

JULIA HU
Telephone No : (02) 6283 2754

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/SG2004/000371

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
US	6537437	US	6797187				
US	6277257	AU	33783/00	EP	1169573	US	6013164
		US	6019882	US	6224728	US	6572749
		WO	0055502				

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX